

IN THE CLAIMS

Pursuant to 37 CFR §1.121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

Please amend claims 1, 10, 14, 25 and 27, and cancel claims 9, 24 and 36.

1 1. (Currently Amended) A secondary battery, comprising:
2 an electrode unit having a first electrode plate, a second electrode plate, a
3 separator interposed therebetween, and first and second electrode tabs respectively
4 extending from the first and second electrode plates;
5 a can adapted to accommodate the electrode unit and an electrolytic solution; and
6 a cap plate adapted to seal the can and having an electrolytic solution inlet, a first
7 area of a first opening of the electrolytic solution inlet on a first surface of the cap plate
8 being different from a second area of a second opening of the electrolytic solution inlet
9 on a second surface of the cap plate, the first surface of the cap plate and the second
10 surface of the cap plate opposite to and being spaced apart from the electrode unit, with
11 the first surface facing to an exterior of the secondary battery and the second surface
12 facing to the electrode unit, and with the first area being smaller than the second area,
13 wherein the electrolytic solution inlet has a stepped portion recessed to a
14 predetermined depth in the neighborhood of the electrolytic solution inlet.

1 2. (Canceled)

1 3. (Canceled)

1 4. (Previously Presented) The secondary battery of claim 1, further comprising at
2 least one channel adapted to facilitate injection of an electrolytic solution in the
3 neighborhood of the electrolytic solution inlet.

1 5. (Previously Presented) The secondary battery of claim 4, wherein one end of
2 the channel is integrated with and connected to the electrolytic solution inlet.

1 6. (Previously Presented) The secondary battery of claim 5, wherein the channel
2 is linearly shaped and arranged radially in the neighborhood of the electrolytic solution
3 inlet.

1 7. (Previously Presented) The secondary battery of claim 4, wherein the channel
2 has a depth in a range of 0.1mm to 0.5 mm.

1 8. (Original) The secondary battery of claim 1, wherein the electrolytic solution
2 inlet has a sloping cross-section.

1 9. (Canceled)

1 10. (Currently Amended) The secondary battery of claim [[9]] 1, wherein the
2 stepped portion has a depth in a range of 0.1mm to 0.5 mm.

1 11. (Previously Presented) The secondary battery of claim 1, wherein the first
2 electrode tab is electrically connected to a terminal pin which is physically connected to
3 the cap plate and electrically insulated from the cap plate, and the second electrode tab is
4 welded to the cap plate at a position between the terminal pin and the electrolytic solution
5 inlet.

1 12. (Previously Presented) The secondary battery of claim 1, with the first
2 electrode tab being electrically connected to a terminal pin which is physically connected

3 to the cap plate and electrically insulated from the cap plate, the second electrode tab
4 being welded to the cap plate at a first position and the terminal pin being disposed
5 between the electrolytic solution inlet and the first position.

1 13. (Previously Presented) The secondary battery of claim 12, further comprising
2 a safety vent arranged at a second position, the second electrode tab being disposed
3 between the terminal pin and the second position , and the safety vent being adapted to
4 rupture when the internal pressure of the sealed can increases to a level greater than a
5 predetermined allowed level.

1 14. (Currently Amended) A secondary battery, comprising:
2 an electrode unit having a first electrode plate, a second electrode plate, a
3 separator interposed therebetween, and first and second electrode tabs respectively
4 extending from the first and second electrode plates;
5 a can adapted to encase the electrode unit and an electrolytic solution;
6 a cap plate adapted to seal the can;
7 a terminal pin electrically connected to the first electrode tab and physically
8 connected to and electrically insulated from the cap plate;
9 an insulating plate provided on a second surface of the cap plate and extending in a
10 direction along which the cap plate extends and arranged to insulate the terminal pin from
11 the cap plate; and
12 the second electrode tab being welded to the cap plate at a position, the terminal
13 pin being disposed between an electrolytic solution inlet and the second electrode tab, a
14 first area of a first opening of the electrolytic solution inlet on a first surface of the cap
15 plate being different from a second area of a second opening of an injection hole on the
16 second surface of the cap plate, the first surface of the cap place and the second surface of
17 the cap plate opposite to and spaced apart from the electrode unit, the first surface facing

18 to an exterior of the secondary battery and the second surface facing to the electrode unit,
19 and with the first area being smaller than the second area₂

20 wherein a stepped portion recessed to a predetermined depth is arranged in the
21 neighborhood of the injection hole.

1 15. (Previously Presented) The secondary battery of claim 14, with the
2 electrolytic solution inlet being arranged to overlap the insulating plate, and the injection
3 hole disposed corresponding to the electrolytic solution inlet arranged in the insulating
4 plate.

1 16. (Canceled)

1 17. (Canceled)

1 18. (Canceled)

1 19. (Previously Presented) The secondary battery of claim 15, further comprising
2 at least one channel adapted to facilitate injection of an electrolytic solution in the
3 neighborhood of the injection hole.

1 20. (Original) The secondary battery of claim 19, wherein one end of the channel
2 is connected to the injection hole.

1 21. (Previously Presented) The secondary battery of claim 20, wherein the
2 channel is linearly shaped and arranged radially in the neighborhood of the injection hole.

1 22. (Previously Presented) The secondary battery of claim 19, wherein the

channel has a depth in a range of 0.1 mm to 0.5 mm.

23. (Original) The secondary battery of claim 15, wherein the injection hole has a sloping cross-section.

24. (Canceled)

25. (Currently Amended) The secondary battery of claim ~~[[24]]~~ 14, wherein the stepped portion has a depth in a range of 0.1 mm to 0.5 mm.

26. (Previously Presented) The secondary battery of claim 14, further comprising a safety vent arranged at a position, the second electrode tab being disposed between the terminal pin and the position, and the safety vent adapted to rupture when the internal pressure of the sealed can increases so as to be greater than a predetermined allowed level.

27. (Currently Amended) A secondary battery, comprising:
an electrode unit having a first electrode plate, a second electrode plate, a separator interposed therebetween, and first and second electrode tabs respectively extending from the first and second electrode plates;
a can adapted to encase the electrode unit and an electrolytic solution;
a cap plate adapted to seal the can and, said cap plate having an electrolytic solution inlet;
a terminal pin electrically connected to the first electrode tab and physically connected to and electrically insulated from the cap plate;
an insulating plate arranged on a second surface of the cap plate, said insulating plate extending in one direction of the cap plate and insulating the terminal pin from the

cap plate; and

the electrolytic solution inlet being arranged to overlap the insulating plate, and an injection hole disposed in correspondence with the electrolytic solution inlet, the electrolytic solution inlet being positioned in the insulating plate, a first area of a first opening of the electrolytic solution inlet on a first surface of the insulating plate being different from a second area of a second opening of the injection hole on a second surface of the cap plate, the first surface of the insulating plate and the second surface of the cap plate opposite to and spaced apart from the electrode unit, the second surface of the cap plate facing to an exterior of the secondary battery and the first surface of the insulating plate facing to the electrode unit, and the first area being bigger than the second area,

wherein a stepped portion recessed to a predetermined depth is arranged in the neighborhood of the injection hole.

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Previously Presented) The secondary battery of claim 27, further comprising at least one channel adapted to facilitate injection of an electrolytic solution in the neighborhood of the injection hole.

32. (Original) The secondary battery of claim 31, wherein one end of the channel is connected to the injection hole.

33. (Previously Presented) The secondary battery of claim 32, wherein the

2 channel is linearly shaped and arranged radially in the neighborhood of the injection.

1 34. (Previously Presented) The secondary battery of claim 31, wherein the
2 channel has a depth in a range of 0.1mm to 0.5 mm.

1 35. (Original) The secondary battery of claim 27, wherein the injection hole has a
2 sloping cross-section.

1 36. (Canceled)

1 37. (Previously Presented) The secondary battery of claim 36, wherein the
2 stepped portion has a depth in a range of 0.1mm to 0.5 mm.